

Fire Research Report

Interventions in Māori House Fire Mortality Rates through Innovations in Healthy Māori Housing Solutions

**International Research Institute
for
Māori and Indigenous Education**

June 2001

Through Article 1 of the Treaty of Waitangi, under 'kawanatanga', the Fire Service as a Crown agency is in a position to develop an organisational partnership with Maori through the development of a specific Fire Service Treaty policy that will assist in the identification, prioritising and delivery of effective services and fire intervention strategies to the Maori community.

It is further suggested that Treaty policy implementation strategies involve cost benefit analysis and regional audits of performance for each of the fire regions. This would contribute to the monitoring and ongoing evaluation of the effectiveness of specific fire intervention strategies for Maori.

Following the development of a robust Fire Service Treaty Policy it is recommended that a National Maori Advisory body be created and made responsible for the development of Regional Multi Agency Maori Fire Safety Taskforces. The monitoring and review of these Taskforces can be facilitated at a national level through the National Maori Advisory Body and at local levels through regional review mechanisms.

This report indicates that an Interagency Taskforce focusing on the development of a series of joint venture Fire Awareness campaigns (involving the Fire Service, other Government agencies and existing Maori Social Service Providers) will be effective in delivering fire awareness programmes and environmental interventions to Māori.

Te Whare Hauora

Interventions in Maori House Fire
Mortality Rates
Through innovations in Healthy
Maori Housing Solutions

15/06/2001

International Research Institute for Maori
and Indigenous Education

Rau Hoskins
Linda Smith
Jason De Santolo

HE TANGI MO TANA TAMA¹

*E Hika ma e! i hoki mai au i Kereruhuahua,
Noho tupuhi ana ko au anake i te tamaiti mate.
Me te tai hokohoko ki te awa i Tirau, e i;
Tangi whakaroro ana ki te Houhangapa.*

*Tera ia taku mea kei te tau o te marino, e,
Kei ona whakawiringa i roto i te Apiti;
E taututetute ana, kia puta ia ki waho re e i,
Ki te kai tiotio i tiria ki te mapou.*

*Tera te Rerenga whakatarawai ana e i.
Whakaangi mai ra, e tama, me he manu.
Mairatia iho te waha kai rongorongo e
Hei whakaoho po i ahau ki te whare ra.*

O friends! I am now returned from Kereruhuahua,
A fugitive bereft am I, because a child is dead.
Like the tides within Tirau forever rising and falling
Is my wild lamentation within Houhangapa.

Yonder lies my cherished one on a peaceful slope
beyond the winding course within Te Apiti;
(His spirit) strives in vain to open up the pathway
To the tasty *tiotio* loosened with the Mapou.

Lo, Te Rerenga like a misty apparition appears,
Soar hither then, O son, like the bird,
And leave behind the sweet sound of your voice
To comfort my wakeful nights within the house.

¹ 'This song is a lament by Hinekaukia for her son who was burnt by fire at Kereruhuahua, in the district of Waipaoa, in the Gisbourne area'. Nga Moteatea (The Songs) Part 1, A selection of Annotated Tribal Songs of the Maori with English translations, *He Tangi Mo Tana Tama*, The Poynesian Society Inc, Auckland, 1988, pp.134-135.

1.0 Contents

2.0	ACKNOWLEDGEMENTS	4
3.0	KEY POINTS SUMMARY	4
4.0	AIMS OF RESEARCH.....	7
4.1	<i>Specific Objectives</i>	7
5.0	EXISTING RESEARCH.....	7
5.1	<i>Limitations of research</i>	8
5.2	<i>Need for other research approaches</i>	9
6.0	METHODOLOGY OF THE RESEARCH	9
6.1	<i>Research programme</i>	11
6.2	<i>Ethical issues</i>	11
6.3	<i>Interviews and backgrounds of participants</i>	11
6.4	<i>Fire Risk Template development</i>	12
6.5	<i>Research Participant hui</i>	12
7.0	INDEPENDENT ANALYSIS AND REVIEW OF INCIDENTS.....	13
7.1	<i>Introduction</i>	13
7.2	<i>Fire Mortality Review and Analysis # 1</i>	13
7.3	<i>Account of Events</i>	14
7.4	<i>Critical factors</i>	15
7.5	<i>Analysis</i>	16
7.6	<i>Community Forums and professionalism in public/grief situations</i>	16
7.7	<i>Counselling opportunities</i>	18
7.8	<i>Supervision</i>	18
7.9	<i>Playing with fire – the haututu age range</i>	18
7.10	<i>Environmental factors</i>	19
7.11	<i>Point of contact for whanau</i>	20
7.12	<i>Fire safety awareness measures for Maori</i>	21
7.20	<i>Fire Mortality Review and Analysis # 2</i>	22
7.21	<i>Account of Events</i>	22
7.22	<i>Critical Factors</i>	23
7.23	<i>Fire Service and Police liaison</i>	24
7.24	<i>Media Policy</i>	25
7.25	<i>Counselling Opportunities</i>	27
7.26	<i>Analysis</i>	28
7.27	<i>Fire Awareness</i>	28
8.0	MAORI FIRE RISK TEMPLATE.....	30
9.0	RESEARCH IMPLICATIONS - RECOMMENDED INTERVENTIONS	39
9.1	<i>Treaty Policy</i>	39
9.2	<i>Potential role of Maori Social Service providers</i>	39
9.3	<i>Appointment and role of Maori Fire Safety Educators</i>	41
9.4	<i>Whanau liaison and media policy</i>	42
9.5	<i>Counselling opportunities</i>	42
9.6	<i>Landlord and tenancy issues</i>	44
9.7	<i>Advertising and Awareness Campaigns</i>	46
9.8	<i>Potential role of whanau with first hand experience</i>	47
9.9	<i>Smoke Alarms</i>	47
9.10	<i>Research and development required in delivering fire safe environments for Maori</i>	47
9.11	<i>Dual focus on behavioural and environmental factors</i>	48
9.12	<i>Rural Housing Campaigns</i>	48
10.0	STAKEHOLDER RELATIONSHIPS	49
10.1	<i>Treaty based multi-agency Taskforce</i>	50
11.0	APPENDIX	51
11.1	<i>Table 1</i>	51
11.2	<i>Table 2</i>	51
12.0	BIBLIOGRAPHY	52

2.0 Acknowledgements

He mihi kau ana ki a koutou katoa i tautoko mai i tenei mahi rangahau te Whare hauora. Na tenei rangahau kua mohio tatou katoa ki nga hua o tenei kaupapa. No reira tena koutou katoa.

The researchers would like to thank everyone who has contributed to the compilation of this report. In particular we would like to thank:

- Irene Gregory and Lesley Savage and their whanau who have shared their stories and experiences and who have supported and guided this research
- Piki Thomas, Mike Lister, Bill Butzbach, Paula Beaver, Jim Dance and all other members of the New Zealand Fire Service for sharing their insights, and for providing support and assistance
- Maori Social Service Providers including Dianne Gibson – Ngati Porou Hauora, Grant Berghan – Te Hauora o te Taitokerau and Matapihi Kingi – Tipuora.
- Mavis Duncanson for her support and advice

3.0 Key Points Summary

The following report has been prepared with the specific objective of assisting the New Zealand Fire Service (Fire Service) in better understanding the breadth of issues associated with Maori house fire fatalities, with a view to the subsequent development of a range of policies and strategic interventions aimed at reducing the disproportionate number of Maori affected by domestic fires.

The following points outline the key outcomes and recommendations of the research project.

Treaty Policy

Through Article 1 of the Treaty of Waitangi, under 'kawanatanga', the Fire Service as a Crown agency is in a position to develop an organisational partnership with Maori through the development of a specific Fire Service Treaty policy that will assist in the identification, prioritising and delivery of effective services and fire intervention strategies to the Maori community.

It is further suggested that Treaty policy implementation strategies involve cost benefit analysis and regional audits of performance for each of the fire regions. This would contribute to the monitoring and ongoing evaluation of the effectiveness of specific fire intervention strategies for Maori.

Interagency Taskforce and Intervention Programmes

Following the development of a robust Fire Service Treaty Policy it is recommended that a National Maori Advisory body be created and made responsible for the development of Regional Multi Agency Maori Fire Safety Taskforces. The monitoring and review of these Taskforces can be facilitated at a national level through the National Maori Advisory Body and at local levels through regional review mechanisms.

This report indicates that an Interagency Taskforce focusing on the development of a series of joint venture Fire Awareness campaigns (involving the Fire Service, other Government agencies and existing Maori Social Service Providers) will be effective in delivering fire awareness programmes and environmental interventions to Maori.

Appointment and roles of Maori Fire Safety Educators

Based on the apparent success of the role played by the Maori Fire Safety Educator in the Bay-Waikato Fire region since 1997 and the over representation of Maori in fire mortality and injury rates nation wide, the appointment of Maori Fire Safety Educators to all six remaining fire regions is seen as an urgent priority.

Fire Service Whanau liaison and media policy

The development of specific Fire Service, Police, media and whanau liaison policies will assist in the provision of timely and sensitive information to whanau affected by fire incidents.

Understanding Maori/Cultural Awareness

The development of Kaupapa Maori and cultural sensitivity training programmes will assist in the provision of appropriate and effective services to whanau affected by fire incidents. This could be implemented for instance through combined Maori Social Service Provider, Fire Service and NZ Police training workshops.

Availability of appropriate grief counselling services

The ability of the Fire Service, in conjunction with other agencies, to refer whanau affected by fire fatalities to qualified grief counselling and/or support groups will greatly assist in supporting these whanau through the grief process.

Research and Development required in delivering fire safe environments for Maori

The Fire Service in conjunction with other agencies is in a position to sponsor more detailed research and development of both new and retrofitted fire safe home environments for Maori. Such research and development programmes could be effectively sponsored and promoted by the proposed Regional Multi Agency Maori Fire Safety Taskforces.

Advertising and Awareness Campaigns

The development and maintenance of a database of Maori whanau affected by fire fatalities will allow the Fire Service to utilise appropriate individuals in the development and delivery of effective local and national fire awareness programmes.

Dual focus on behavioural and environmental factors

There is evidence to suggest that, as behavioural factors within the Maori community are predominantly socio-economically based, (and as such will only change over time), in the short term a greater focus on environmental factors will assist in lowering Maori house fire mortality rates.

Smoke Detectors

The success of the smoke detector installation campaign in the Bay of Plenty (1997-1999) indicates the appropriateness and priority of replicating such campaigns throughout the country in an attempt to lower the incidence of Maori house fire mortality rates.

Future Research Focuses

The Maori Fire Risk Template developed as part of this study identifies a series of interventions based on countering the identified fire risk factors. In most cases it is recommended that further research and/or consultation with other agencies is required in order to adequately design and implement these specific strategies.

Specifically the incidence of Maori fire deaths related to the use of naked flame light and heat sources in houses, out buildings and caravans in rural areas indicates the need for targeted research and joint venture intervention programmes focusing on improving fire safety in these environments.

4.0 Aims of Research

The aim of this research project is to help reduce the number of potential contributing factors relating to house fires involving Maori through the development of a 'Maori friendly' fire risk assessment tool and a series of policy and information based 'interventions'.

4.1 Specific Objectives

The specific objectives of this project were to:

- Develop a series of 'Maori friendly' risk analysis templates/check lists focusing upon social/behavioural and environmental risk factors.
- Develop ways of minimising the use of naked flames for lighting and heating through alternative energy technologies. Exploration of means of funding alternative technology 'packs' to be made available to both existing rural families and new Papakainga developments.
- Explore and map appropriate inter-agency linkages and connections - developing functional relationships between the fire service, health funding agencies and Maori social service providers as a means of providing integrated fire awareness education and support for Maori.

While the above objectives were the initial focus of the research it became apparent through the interview and incident analysis process that there were other equally, if not more pressing, issues worthy of further investigation. This process of investigation has necessarily tended to shift the focus of the project into these other areas.

5.0 Existing research

Existing research specifically related to fire mortality and safety issues for Maori is severely limited.

The University of Otago Research Team has recently produced a paper on process and outcome evaluations of the *Auahi Whakatupato* smoke alarm installation project in the Eastern Bay of Plenty. One objective of the evaluation paper was to 'provide record and evaluation of a smoke alarm distribution programme undertaken in the Eastern Bay of Plenty among residents of eight communities'.²

Amongst other important conclusions, the researchers highlight that participating householders report *Auahi Whakatupato* smoke alarms have

² Mavis Duncanson, Alistair Woodward, Papaarangi Reid, University of Otago Research Team, *Process and outcome evaluation of Auahi Whakatupato smoke alarm installation project in the Eastern Bay of Plenty 1997-1999*, August 2000, p.5.

successfully warned of a significant number of potential or actual fire incidents.³

The same researchers produced a paper discussing social and economic deprivation and its relationship to fatal and unintentional house fires in NZ.⁴ The researchers confirmed that 'the disproportionate burden of injury related death and injury borne by Maori is...well established' and highlighted that hospitalisation of Maori from injuries from fire and flame in the domestic location was three times that of non-Maori.⁵

A report in 1999, titled '*Injury to Maori, Does it really have to be like this?*' produced some key statistical analysis clearly showing disproportionate mortality and morbidity rates for Maori.⁶ The report was able to confirm that fire/burns are significant causes of injury and subsequent hospitalisation for mokopuna, tamariki and kaumatua.⁷ The report also confirmed that fire/burns are significant causes of death resulting from injury for mokopuna, tamariki and kaumatua.⁸

A most recent and extensive paper is the New Zealand Fire Service Bay-Waikato Region Maori Fire Study. This thorough, mostly quantitative research, aimed to 'understand why death by fire is more common for Maori than Pakeha in the Waikato-Bay of Plenty Region'.⁹ The report outlined some key finding in relation to Maori fire safety awareness and practices.

In 1994, Ogilvy & Mather produced a report on community characteristics of residential fire risk in NZ, commenting that there was no NZ literature associating fire risk with ethnicity. The report pointed out that inclusion of ethnicity in the study is important because 'it needs to be taken into account when devising a prevention campaign. Such a campaign aimed at the general population in an area may not be successful with Maori or Pacific Island families'.¹⁰

5.1 Limitations of research

³ Ibid., p.25.

⁴ Mavis Duncanson, Alistair Woodward, Papaarangi Reid, University of Otago Research Team, *Social and economic deprivation and fatal unintentional domestic fire incidents in New Zealand 1988-1998*, December 1999.

⁵ Ibid., p.5.

⁶ It is noted that Broughton, in determining '*significance of injury in relation to other health problems*' analysed published mortality data for 1994 (NZHIS 1996) and morbidity data for period 1984-1993 (NZHIS 1985-1994). Morbidity data was confined to public hospital discharges and excluded day patients. The 'sole-Maori' classification of ethnicity was used. See report p.11 for detailed discussion of research methods. John Broughton, *Injury to Maori, Does it really have to be like this?*, Dunedin: Te Ropu Rangahau Hauora o Ngai Tahu and Injury Prevention Research Unit, 1999.

⁷ See 11.1, Table 1.

⁸ See 11.2, Table 2.

⁹ Kay Rayner and Moira Moroney, Key Research and Marketing Ltd, *Determining Effective Fire Safety Strategies for Maori, New Zealand Fire Service Bay-Waikato Region Maori Fire Study*, 1999.

¹⁰ Frances Sutton, *Analysis of the community characteristics of the residential fire risk in NZ*, Ogilvy & Mather, 1994, p.3.

The lack of accurate ethnic and socio-economic statistics specific to fire safety incidents and mortality for Maori is recognised as imposing limitations on research and analysis in this area.

The Fire Service Audit team undertaking an Operational Incident Report for the Lincoln Grove tragedy noted deficiencies in the Fire Services information base. Further concern was expressed regarding the Fire Service's primary fire information reporting and analysis system, in that it does not directly collect data on socio-economic or ethnic factors in regards to residential fires. Also, other information that potentially could be used as indicating socio-economic status was proved to be unreliable, (for example fire deaths in caravans used for permanent accommodation were not distinguished from fire deaths in other mobile property such as cars).¹¹

A 1998 briefing paper on the development of a Fire Safety Education officer for Maori (Bay-Waikato Fire region) pointed out that 80% and 90% of the recorded residential Fire Deaths in that region were Maori for 1995/96 and 1996/97 respectively. However the report identifies the concern that without the benefit of any statistical database which identifies household ethnicity, the number of fires occurring in Maori households can only be guessed at.¹²

More recently, leading commentators have recommended that further research into Maori and fire safety should be done in partnership with Maori communities and 'needs to reflect an understanding of cultural values and practices in order to make sense why particular attitudes, behaviour and practices occur'.¹³

Recent change to the Fire Service FIRS reporting system (which attempts to record ethnicity and other factors relating to fire incidents), will in future assist in the provision of such vital information.

5.2 Need for other research approaches

From the preceding discussion it can be seen that there is a clear need for other research approaches which are able to deeply penetrate the complex range of issues associated with Maori lifestyles. When coupled with existing quantitative research, such alternative research methodologies are able to robustly supplement our understanding of these complexities and in turn inform a range of policies and intervention strategies.

6.0 Methodology of the Research

This research is based on a Kaupapa Maori research methodology.

¹¹ New Zealand Fire Service, Audit Team, *Operational Incident Audit (Lincoln Grove, Porirua Fatal House Fire)*, Nov 1997.

¹² New Zealand Fire Service, Dennis H Health, (Assistant Fire Region Commander, Fire Safety), *Briefing Paper; Development of the role of Fire Safety Education Officer for Maori*, Bay-Waikato Fire Region, March 1998

¹³ Megan Tunks, *Maori Fire Study in the Bay-Waikato region, 1999-2000*.

Kaupapa Māori is 'a theory and an analysis of the context of research which involves Māori and of the approaches to research with, by and/or for Māori'.¹⁴ A Kaupapa Māori approach does not exclude the use of a wide range of methods, but rather signals the interrogation of methods in relation to cultural sensitivity, cross-cultural reliability, useful outcomes for Māori, and other such measures. As an analytical approach, Kaupapa Māori is about thinking critically, including developing a critique of Pākehā constructions and definitions of Māori and affirming the importance of Māori self-definitions and self-valuations.¹⁵

Locating Kaupapa Māori as an intervention strategy, Smith, Fitzsimons and Roderick highlight the following:

'Kaupapa Māori encompasses the social change or intervention elements that are common across many different sites of Māori cultural struggle, and as the collective set of key intervention elements in the Māori-driven, cultural resistance initiatives'.¹⁶

Smith et al. argue that Kaupapa Māori has the potential to provide elements for effective transformation for the following reasons:

- it has the capacity to address Māori social, economic and educational crises;
- it is derived, in part, from other intervention mechanisms but transcends them in its ability to identify particular structures and processes important for success;
- the notion of whānau is a core feature of Kaupapa theory;
- Kaupapa Māori theory explains the social change or intervention elements that are common across many different sites of Māori cultural struggle including within the educational sites of Te Kohanga Reo and Kura Kaupapa Māori;
- the notion of whānau is central to Kaupapa Māori knowledge, pedagogy, discipline and curriculum;
- its rationale is derived from Te Tiriti o Waitangi.

There is a growing body of literature regarding Kaupapa Māori theories and practices that assert a need for Māori to develop initiatives for change that are located within distinctly Māori frameworks. This does not mean that we are unable to carry out research ethically, systematically and 'scientifically'.¹⁷ In other words, our research remains rigorous. We are also not restricted to examining Māori issues alone as often the issues that impact greatly on Māori

¹⁴ Linda Tuhiwai Smith, *Kaupapa Māori Health Research*. In *Hui Whakapiripiri: A Hui to Discuss Strategic Directions for Māori Health Research*. Wellington School of Medicine: Te Rōpū Rangahau Hauora a Eru Pōmare, 1996.

¹⁵ Linda Tuhiwai Smith & Fiona Cram, *An evaluation of the Community Panel Diversion Pilot Project*. Commissioned by the Crime Prevention Unit, Office of the Prime Minister and Cabinet, Wellington, 1997.

¹⁶ Graeme Hingangaroa Smith, G.H Fitzsimons, P & M Roderick, *A Scoping Report: Kaupapa Māori Frameworks for Labour Market Programmes*, A report to the Māori Employment and Training Commission, International Research Institute for Māori and Indigenous Education, Auckland, 1998.

¹⁷ Linda Tuhiwai Smith, *Kaupapa Māori Health Research*. In *Hui Whakapiripiri: A Hui to Discuss Strategic Directions for Māori Health Research*. Wellington School of Medicine: Te Rōpū Rangahau Hauora a Eru Pōmare, 1996.

are also impacting on other peoples within society. In the past we have found that our research approach is inclusive of other peoples.

6.1 Research programme

This research has taken 9 months and has consisted of two main phases. The first six months involved the following:

- Literature review and creation of database from which a multi-dimensional Maori Fire Risk Template (Fire Risk Template) was developed.
- Independent analysis and review of two recent domestic fire fatalities involving Maori which included interviewing families, key informants and the Fire service.¹⁸ The findings from this analysis were then incorporated into the Fire Risk Template.
- Visit and work collaboratively with three Maori Social Service delivery agencies to further refine and 'test' the Fire Risk Template.

The second phase involved the production of a series of outputs documented within this report, including a refined Fire Risk Template with suggested interventions and implementation strategies together with a series of key recommendations to the Fire Service.

The project involved a principle researcher/project manager at 0.7 for six months and then at 0.3 for three months. An assistant researcher was brought on board to assist in the final stages of the report.

Communities that have been included in this study have been represented by Maori Social Service delivery agencies in Northland, Bay of Plenty and the East Coast.

6.2 Ethical issues

This research project has been approved by the University of Auckland ethics committee.¹⁹ This draft report is confidential and includes the names of the various participants involved. While one of the affected Whanau is willing to retain these names it is anticipated that the final version of the report will provide for the confidentiality of these individuals upon its transferal to the Fire Service for dissemination and/or publication.

6.3 Interviews and backgrounds of participants

As a primarily qualitative research project, a specific focus was placed upon the independent analysis of two fire incidents, with interviewing as the primary method of information gathering.

¹⁸ Totalling 20 interviews.

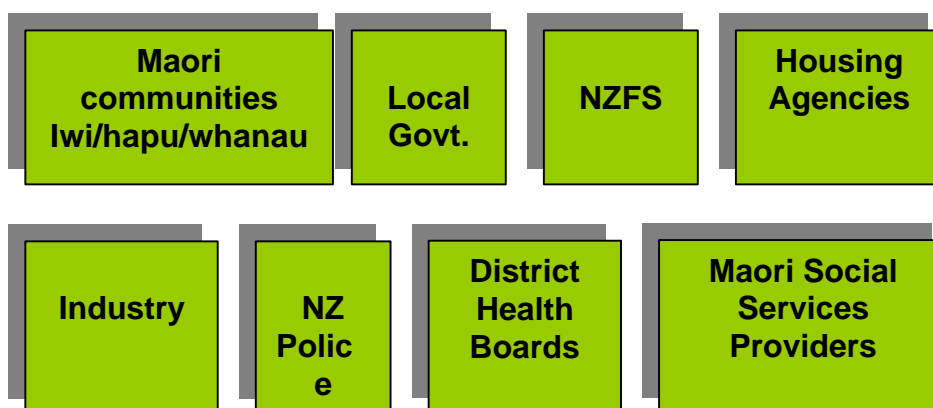
¹⁹ University of Auckland, Ethics committee reference number 2000/204.

Interviews were held with the following Fire Service staff in relation to the Heretaunga Street incident: Bill Butzbach (Fire Region Manager), Mike Lister (Fire Region Safety Officer), Piki Thomas (Waikato, Bay of Plenty Maori Fire Safety Education Officer). Whanau interviews relating to this incident were conducted with Irene Gregory, Wendy Rika, Mori Hita and daughters Naomi and Evelyn Hita.

Interviews were held with the following Fire Service staff in relation to the Weld Street incident: John Sanderson and Terry Philips (attending Fire Service officers) and Piki Thomas.

Whanau interviews included: Lesley Savage, Harawira Savage, Cheryl Wilson, Barry Savage and Julie Rapana.

Identified Stakeholders



- **Fire Risk Template development.**

The process of developing the Maori Fire Risk Template has been valuable in graphically charting the range of risk factors operating within the Maori community. The template is able to provide a unique insight into Maori risk factors and possible fire safety interventions and strategies by involving whanau and Maori Social Service Providers in design stages.

6.5 Research Participant hui

A hui of selected participants in the research project was held at the International Research Institute for Maori and Indigenous Education (IRI) in Auckland on 27th November 2000, with a view to discussing the issues raised by the Fire Risk Template and to allow for cross fertilization of ideas on intervention programmes.

The hui was attended by Lesley and Harawira Savage, Irene Gregory, Wendy Rika (affected whanau members), Dianne Gibson from Ngati Porou Hauora, Piki Thomas – Maori Fire Safety Education Officer for the Bay-Waikato Fire Region and Mavis Duncanson – Researcher for the Department of Public

Health, Wellington School of Medicine together with Rau Hoskins, Linda Smith and Fiona Cram from IRI, also in attendance.

With whanau members associated with both incidents present, the hui was a valuable opportunity for discussion, support and the sharing of ideas. The hui indicated that the use of support groups (made up of affected whanau members), may be very useful in the area of grief counselling.

The hui resulted in several additions and amendments to the Fire Risk Template and was regarded as a successful day by all attendees.

• ***Independent analysis and review of incidents***

7.1 Introduction

The researchers have focused analysis and review on two incidents which have involved whanau from Northland and the East Coast. These detailed case studies provide valuable insight into the complex issues and determinants surrounding the tragedies. It is no coincidence that each incident occurred within a region well known for fire fatalities and incidents involving Maori. Hence the analysis is able to isolate crucial regional and comparative issues for discussion and review.

7.2 Fire Mortality Review and Analysis # 1

Jerome Absolom Marsh & Chanel Joseph Pukeroa

Double Fatality, 44 Heretaunga Street, Tikipunga, Whangarei, 8th February 2000.

The deaths of four year old first cousins, Jerome Marsh and Chanel Pukeroa, in a house fire in Whangarei early last year has received high profile media coverage. So in turn have the grieving whanau through their willingness to assist with fire safety messages (resulting in a series of television advertisements and a 15 minute documentary item) in an attempt to ensure that other lives may be saved through an awareness of these messages.

Further review and analysis of this high profile fire incident is seen as appropriate not only because of the media attention, but also because of the unique circumstances surrounding the incident and the willingness of Whanau members to assist with this research and fire education campaigns in general.

The following review and analysis has been derived from interviews with four of the Whanau members (Grandmother, Grandfather, Mother and Aunt) of the deceased first cousins, Jerome Absolom Marsh and Chanel Joseph Pukeroa. Interviews were also conducted with the Northland Fire Region Safety officer - Mike Lister and the Northland Fire Region Manager - Bill

Butzbach. The Fire Service report FI 6/2000 and newspaper articles have provided other background material for this review of events.²⁰

First contact with both the Whanau and Fire Service officers involved in the incident was established at a Northland Fire Service presentation to the Whanau held on 8th June 2000. This presentation was in honour of the Whanau and their involvement in subsequent fire safety awareness television campaigns organised by the Northland Fire Service. From this introduction the whanau agreed to assist in this research exercise with two separate interviews.

7.3 Account of Events

This brief account of events leading up to and surrounding the double fatality is designed to introduce the review.

The two four year old cousins Jerome and Chanel were in the care of their grandfather Mori Hita at his house in Tikipunga, Whangarei, on the afternoon of Tuesday 8th February 2000. This time with their grandfather was a 'treat' for Mori as he had recently been doing shift work and had been unable to spend much time with them. Irene Gregory, the boys' grand-mother and Mori's ex-wife had been shifting house that day and had offered Mori the kids for a 'couple of hours'.

The cousins had recently been admonished for playing with matches and this was communicated to Mori when he had come to pick them up. Some time after the boys arrival at the house Mori decided to mow the lawns, with the boys initially playing outside on the trampoline. A short time later the boys ventured into the open garage of the three level Housing New Zealand (NZ) home to play. Here it appears they created a hut from stored furniture items in the garage. It appears that the boys found some matches and a candle in one of the drawers and in attempting to light the candle set some foam squabs on fire, before running up stairs to hide - probably fearing the reaction of their grandfather.

A witness walking home from school said that she saw the boys through the open garage door sitting on a couch playing with something. Minutes later on her arrival home (5 houses further down Heretaunga Street) the fire was spotted by her mother who directed her daughter to go and ring for help.

Within minutes of the fire starting Mori was able to hear the sound of the smoke detectors above the noise of the mower and ran to try and find the boys initially presuming they had run outside away from the fire. Unable to get into the garage because of the intensity of the fire, Mori was briefly able to get inside the lounge, but was forced back by the conditions within the room, which was already becoming engulfed with smoke and toxic fumes. The boys

²⁰ New Zealand Fire Service, Bruce Emerson (Investigating Officer), Mike Lister (Assistant Fire Region Commander, Northland Fire Region), Dave Grey (Health and Safety Officer, Northland Fire Region), Investigation report, FI 6/2000, February 2000.

were at this time hiding under a double bed in a bedroom directly above the garage, on the third level of the house.

Three pumps were dispatched on the basis of several telephone calls from neighbours, the first of which arrived at the scene some 6 minutes from the time of the first 111 call. At this time the bottom two levels were 'fully involved in fire' and the crews were alerted that 'there were two children unaccounted for and presumably remaining within the property'.²¹

Irene Gregory (the boys' grandmother) and her partner arrived while Fire Service staff were still trying to put out the fire and was told that the boys were inside and presumed not to be alive. At that time, Irene was seeking to find out more information on her grandchildren. A tense situation arose between Irene and Police officers. At this point, Mike Lister intervened and took over a liaison role with Irene and the Whanau giving regular updates on proceedings until the bodies were removed some time later.

Mike Lister maintained this liaison role with the Whanau over the following months providing information as it became available, and organising their assistance with a fire awareness television advertising campaign which screened from May 2000.

7.4 Critical factors

In reviewing this incident and seeking to draw out the critical issues associated with it, the first point to acknowledge is that a large number of physical and behavioural factors combined to create this tragedy. These factors can be summarised as follows:²²

- **Severity of the fire.** The severity of the fire was increased because it started in the lowest level of the house.
- **High fire load.** There was a higher than usual fire load in the garage due to the storage of household items there.
- **Alterations to garage area.** Due to previous alterations to the garage area there was a greater availability of fuel for the fire in terms of unlined timber stud walls.
- **Supply of oxygen.** There was ample oxygen supply for the fire due to the open garage door and the lack of separation between the garage and the rest of the house. There was also a high local wind at the time, which added additional fuel to the fire.

²¹ New Zealand Fire Service, Bruce Emerson (Investigating Officer), Mike Lister (Assistant Fire Region Commander, Northland Fire Region), Dave Grey (Health and Safety Officer, Northland Fire Region), Investigation report, FI 6/2000, February 2000.

²² For further discussion see the New Zealand Fire Service, Fire Dynamics Report, Fatal Fire, Heretaunga St, February 2000.

- **Spread of fire.** The garage door self closed after the house was well ablaze, with the fire then seeking alternative oxygen supplies within the house and the area of the hiding boys.
- **Children hiding.** The children were in a developmental stage where hiding in a 'safe place' was a natural reaction to the situation.
- **Smoke Alarm Education.** Despite 5 smoke alarms being fitted and operational, the children appeared to be unaware of their significance and proper action on their activation.

7.5 Analysis

In reviewing this incident there are a number of issues worthy of analysis in seeking to both learn as much as possible from this tragedy and draw conclusions which may be further tested and used to inform future fire safety interventions.

7.6 Community Forums and professionalism in public/grief situations

Within a week of the tragedy a community meeting was organised by the Fire Service, both to acknowledge the grief within the community, as well as to impart some specific fire safety information. The evening meeting was held at a local hall with Phil Hemara, (one of the fire officers who attended the incident), acting as the guest speaker for the evening. Of his own volition, Phil attended in plain clothes and expressed his own grief as well as moving into a Fire Safety presentation for the benefit of community members. Whanau members attended this session but had great difficulty reconciling their own grief with the grief expressed by the guest speaker. This situation was heightened by the lack of uniformed and therefore professional presence in the eyes of the whanau.²³

In this situation a natural tendency by a Fire Service officer to empathise with the Whanau in their grief has in fact caused the Whanau further stress at a time when they were looking to and needed the Fire Service to be a "thoroughly professional rock" to cling to.

Here it is essential for all Fire Service staff involved in liaison with whanau and public meetings of this nature to be thoroughly trained and briefed prior to undertaking such roles. This particular instance highlights the fact that grieving family members have a need to find both strength and professionalism from Fire Service personnel to enable them to grieve and not be confronted with the grief of these personnel.

²³ See 7.12 (p.12) for further discussion.

Additional training is required for Fire Service personnel who are involved in public situations and who deal directly with affected Maori whanau.

7.7 Counselling opportunities

Victim support personnel attended the incident but had no further contact with the Whanau after this time. The Whanau tried to seek professional grief counselling but were denied funded counselling by ACC as they did not fit into a rape, alcohol or domestic abuse categories.²⁴ The Whanau were eventually referred to a series of counsellors through their doctor, however, they were unable to find suitable help due to the perceived lack of qualifications and experience of these parties. Both during and since this exercise the Whanau have self-counselled, getting together on a regular and whenever required basis and creating and maintaining their own grief support. The Whanau expressed that perhaps more than anything else the Whanau would have liked to talk to someone who had been through a similar tragedy.

7.8 Supervision

Anecdotal evidence suggests that a Maori cultural view of appropriate levels of child supervision is different from that of non-Maori. Historical sources suggest Maori cultural factors have changed over time and that today a combination of social class and cultural traits have had impacted upon child supervision. Here there is perhaps a greater tendency to presume the safety of tamariki in ones care. It can be seen that such views are derived from extended whanau and kainga (village) living, whereby responsibility for tamariki resided with the entire family unit and was not the domain of a single caregiver. Here these cultural attitudes to tamariki supervision have perhaps not been able to keep pace with the increased risk factors associated with both urbanisation and the increasing nuclear family reality.

In this particular instance the tamariki were presumed to be safe by their grandfather despite them being out of his sight.

It appears that more research and analysis of Maori attitudes toward tamariki supervision should be undertaken, with regard to developing specific approaches to this critical element of fire safety within the Maori community.

7.9 Playing with fire – the haututu age range

The three to eight age group (especially in boys) is known to be a high risk age range in terms experimental behaviour. Jerome and Chanel were perfectly normal four year olds with a typical fascination with fire. Despite being admonished several times and warned of the dire consequences, it appears that this fascination continued unabated. In this particular situation it appears that despite concern from whanau members, fire awareness

²⁴ See 9.5 (p.40) for further discussion.

campaigns specifically targeting parents and/or caregivers of children in this age range failed to reach this particular whanau. While pre-school fire education programmes have been developed (with a Kohanga Reo/year 1 and 2 Maori version completed in December 2000) there appears to be a difficulty in getting the message through to both parents/caregivers and tamariki and the significant proportion of children including Maori who do not or only intermittently attend Kohanga Reo/Preschool and are thus much more difficult to reach with fire prevention campaigns.

From the above it appears that specific programmes should be developed for targeting 'hard to reach' whanau, particularly those with tamariki in this age range.

Developing mechanisms to ensure that Kaupapa Maori Kohanga Reo and Kura based fire prevention programmes are reinforced in the home is also a priority.

7.10 Environmental factors

The Marsh/Pukeroa fire tragedy occurred in a Housing New Zealand Ltd (HNZ) low-income home in Tikipunga. The house was built in 1976 for Housing Corporation, the lounge and kitchen being single storeyed and the garage, bathroom and bedrooms being 2 storeyed. With a timber framed, stud wall design, the external facings were a mixture of Hardiplanks and coverline sheets. Internally the linings were Gypsum board and Pinex soft board ceilings.

Initially garage and lounge were connected by a short flight of stairs, separated by a partition wall with a single leaf door. In following years a new stud wall was erected, separating former laundry and garage areas. This was only skinned on the laundry side, which became a bedroom, with an additional door for access to the garage. Later on, the tenant disestablished the door into the garage and removed the partition wall at the end of the passageway. This meant the house was effectively open from top to bottom.

The fire which originated in the garage, quickly spread through the open stairwell up to the middle level, and up another open stairwell to the top level.

The Fire Investigation Report concluded that had a door to door closure been installed at the bottom of the stairs, then the spread of heat and smoke up the internal stairway would of been delayed.²⁵

The report also concluded that the tragedy could have been prevented if a residential automatic sprinkler system and separating doorway were built in, along with early warning smoke alarms.

²⁵ New Zealand Fire Service, Fire Investigation Report, Fatal Fire, Heretaunga St, February 2000.

The Fire Dynamics Report concluded that the fire resulted in fatalities because there were no barriers to spread of products of combustion between top and bottom of the house.²⁶

While not a phenomenon peculiar to Maori, it appears that Maori are more likely to alter their dwellings to better meet their particular cultural/whanau requirements. Socio-economic factors also play a key role in determining that Maori householders make alterations without employing tradespeople who are legally obliged to meet housing and safety standards. Often these alterations are undertaken without building consents and/or are carried out by the householder or semi-skilled people.

Here larger or extended families require a greater number of sleeping spaces with a preference for open planning, which increases the feeling of space as well as the flexibility of these spaces in catering for larger family gatherings or extended stays from relatives. It appears that Mori Hita did undertake some of the alterations to the garage area, with other alterations presumably done by previous HNZ tenants. HNZ have no records of these alterations yet during this period they had changed the designation of the house from three to four bedrooms.²⁷

The key issue here is that Housing New Zealand, as the landlord, has a responsibility to monitor its own housing stock and the needs of its occupants to ensure that any alterations comply with Building Code and do not put tenants in an increased fire risk situation.

7.11 Point of contact for whanau

From this fire incident it is clear that whanau directly associated with a fire mortality need to have a single qualified point of contact with the Fire Service. This contact person would be able to maintain a liaison role both during and following a fire incident. Here the continuity of such professional contact is essential in such a time of grief.

A specific whanau liaison policy and strategies for each incident are required in order to better meet the needs of affected whanau.

²⁶ New Zealand Fire Service, Fire Dynamics Report, Fatal Fire, Heretaunga St, February 2000.

²⁷ Ibid.

7.12 Fire safety awareness measures for Maori

A unique factor associated with this fire incident is the willingness and ability of Whanau members (particularly Irene Gregory) to assist with fire safety and prevention messages directed at the wider community. While the television advertising campaign featuring Irene appears to have been very successful, a further bid to the Fire Service by the Jerry Morris advertising agency (including Irene as a regional ambassador) was turned down in favour of a competing advertising agency proposal.

It appears that the development of a formalised participation mechanism within the Fire Service would maximise involvement of people (with direct experience of fire mortality) who express a willingness and capacity to talk to others about their experiences. Such people would be able to play a key role in fire prevention and awareness programmes at both regional and national levels.

With additional training, such people could become a valuable resource for the Fire Service and could also be involved in support groups and/or counselling for other whanau.

The Fire Service could benefit by taking an active role in supporting and recruiting Maori who have been directly involved in a fire incident and who display the willingness and aptitude to assist in local and national fire awareness campaigns.

7.20 Fire Mortality Review and Analysis # 2

Liana Shelley Savage & Raymond Leonard Down.

Double Fatality, 14 Weld Street, Kawerau, 1st January 1997.

The house fire that resulted in the deaths of Liana Savage and Raymond Down early on New Years day can be classified as resulting from a series of rather typical circumstances. Most, if not all of us have at one time or other inadvertently left a pot on the stove and have been alerted to our actions by acrid smoke and/or a small stove fire. The circumstances that combined with this act to cause the fatalities were also rather typical – New Years Eve, alcohol, staying up very late and of course being very tired. In fact it can be seen that it was the combination of a series of ‘typical’ behaviours which led to this tragedy. The concern for this research project is that if such behaviours are indeed typical within the Maori and wider communities then the ongoing risks of similar fire deaths remain an ever present threat.

7.21 Account of Events

Liana Savage (twenty one years of age), her son Jayson (seven months old) and her boyfriend of approximately one year, Raymond Down (twenty five years old, also known as Sonny) were living in a rented house in Weld Street Kawerau on New Years Eve 1996. Liana had earlier told her mother, Lesley Savage, that she would be spending the night at her cousin’s place and taking baby Jason with her. She later rang her mother to say they had changed their plans and could she look after Jason. Lesley agreed to the request and Liana and Raymond called around to drop off Jason at approximately 7.00pm.

After taking the decorations down from the Christmas tree Liana and Raymond with their sober driver Barry Savage (Liana’s Brother) left for the Kawerau Hotel and went later to a party at a cousin’s house. Barry the sober driver dropped them at their cousin’s house and returned home with their vehicle. It appears that Liana and Raymond walked home to their own house (they were apparently hungry and their cousin did not have any food in the house) arriving at approximately 4.30am on New Years day. They then prepared some food and went to bed, inadvertently leaving an aluminium pot on high on the left front element. A neighbour, Robert Tangira was alerted to the resulting kitchen fire by dogs barking and ran to another neighbours house to call the fire brigade.

The Kawerau Fire Brigade responded to a 111 call at 0529, with one Fire appliance attending the scene and finding the building ‘well involved’ on arrival at 0530. The Fire Incident Report estimates that the fire had been alight 10-15 minutes before discovery and was extinguished between two and four minutes following the arrival of the Fire appliance:

'A persons reported message was transmitted at 0536 and shortly after a Male and Female person were found in the passage of the house outside the main bedroom. Resuscitation procedures were carried out without result'.²⁸

Despite the fact that no one could confirm that there was anyone in the house, (the occupants vehicle not being present), a forced entry was made to the house soon after arriving at the scene with the occupants eventually found in the passage.

Just prior to discovering Liana and Sonny the ambulance was called and they were removed outside, where resuscitation attempts were initiated by the Fire Service officers present until the arrival of the ambulance.

The neighbour, Hati Maxwell, knowing the Savage family, rang through to Lesley after calling the Fire Brigade. Lesley and her husband, Harawira, attended the scene also within minutes. Upon their arrival the site had been cordoned off and they were prevented from getting any closer to the house.

'And when we got there, the house was like it was still on fire. The fire brigade and the ambulance were there and they'd set up - put up those things and they wouldn't let us pass them. And then they wouldn't say whether - at the time, they wouldn't say anything really'. Lesley Savage (L.S.)

The parents remained at the front of the house for approximately two hours, with no information being offered by either the Police in attendance or the Fire service. It was only until a Doctor arrived and requested identification of the two people, that information was forthcoming.

'So, eventually the doctor turned up and they needed someone to identify them and it wasn't until he actually turned up that - well I think we really knew but we weren't sure until the doctor said that they needed someone to identify these two people'. (L.S.)

'Talking to the next door neighbour after, he was saying that he didn't know they were home. He thought they weren't there because their car wasn't there. Nobody tried to get into the house.' (L.S.)

7.22 Critical Factors

Critical factors in the Weld St fire which combined to result in the deaths of Liana Savage and Raymond Down are as follows:

- **Unattended cooking.** Inattention to turning off stove element. Probably due to the influence of alcohol and drugs combined with the

²⁸ New Zealand Fire Service, Fire Dynamics Report, Fatal Fire, Heretaunga St, February 2000. FSIR Report.

effects of a very late night. The left front element was mistakenly left on high instead of being turned off.

- **Alcohol and drugs.** The coroners report concluded that both of the deceased had been under the influence of both alcohol and drugs at the time of their deaths. This factor would also have combined with their tiredness in producing a deep sleep which was difficult to awaken from.
- **Tiredness.** The couple arrived home in the vicinity of 4.30am and had been drinking since before 7.00pm the night before. Their fatigue probably contributed to the difficulty in waking up to the smoke and fire or even their dog barking in time to escape.
- **Lack of smoke alarms.** The house had no smoke alarms fitted. Although not conclusive it is possible that operating smoke alarms would have alerted the couple to the fire in time to evacuate the house or put out the stove fire.
- **Aluminium pot.** The aluminium pot was found melted on the stove with the remains of food in it. Aluminium pots have a tendency to melt under sustained high temperatures and are thus more likely to spread a stove fire (rather than contain it), as a stainless steel pot would normally do.
- **Fire intensity and loadings.** Discussions with one of the attending Fire Safety officers (John Sanderson) indicated that the fire was a very intense one, probably due to the construction of the house which comprised of brick veneer cladding and a tile roof (both of which tend to concentrate the heat of a house fire). Another officer indicated that the Pinex ceilings had provided a ready source of combustible material leading to a large heat build up and broken windows which again fueled the fire.
- **Lack of fire awareness.** It is first nature to attempt to put out or find the cause of a fire once discovered. It is possible that with more fire awareness the couple would have got straight out the bedroom window to safety.

7.23 Fire Service and Police liaison

The above incident bears some similarity to the Heretaunga Street incident. It reveals the apparent lack of a Fire Service liaison policy to keep affected individuals and groups informed at a time when they are most in need of information. It also raises the need for the Fire Service and Police to coordinate their roles in maintaining a single point of contact and ongoing flow of information for whanau both during and post incident.

'I think the attendant, the St Johns attendant, said that they had resuscitated them for a little while or something but not quite so what was traumatic was being kept out for about - it would have been about two hours and not knowing'. (L.S.)

'Well actually, not told that they weren't alive. I think that was the worst part. Yeah. So from that, they formed a sort of a committee whereby people would be told things instead of being left and not knowing, really knowing for sure what was going on. But I don't know if anything's come of that'. (L.S.)

There were some positive outcomes resulting from this incident as initiated by the Fire Service following complaints by the whanau. A forum at Tu Teao marae in Te Teko and a community support group were formed and charged with assisting the Fire Service and Police in liaising with Whanau in such instances and disseminating Fire Awareness messages. This group included the Fire Service, St John's ambulance representatives and local kaumatua. According to Terry Philips, one of the organisers, this forum later led to a series of initiatives including the combined East Bay Health/Fire Service smoke detector campaign conducted between 1997 and 1999.

'The other thing that they did which I think was really good was that they initiated a support group of not so much kaumatua but they were like elders of the community for the purpose of getting in touch with whanau when something like that happened. Yeah, that was quite good and that was initiated by the Fire Department'. (L.S.)

As distinct from the Heretaunga Street incident, where a Fire Service officer became a valuable support person for the Whanau, the individual who became an important post incident point of contact for the Whanau was Constable George Westerman, one of the attending Police officers.

'But I think I was quite lucky in that the policeman that attended the scene kept in contact with us all the time. He'd probably come around about once or twice a week eh Julie? And that was quite good. So he kept us informed about what was going on and dropping in for a chat'. (L.S.)

From this fire incident it is clear that whanau directly associated with a fire mortality need to have a single qualified point of contact with the Fire Service who is able to maintain a liaison role both during and following a fire incident. Here the continuity of such professional contact is essential in such a time of grief.

7.24 Media Policy

This incident raises the urgent need for a co-ordinated Police/Fire Service media policy to ensure that sensitive information relating to fire deaths is communicated to and discussed with grieving families prior to release to the

media. In this instance, information released to the media contradicted earlier verbal reports from the Fire Service resulting in the Savage and Down families complaining to the Fire Service and Police. Here the effect upon the grieving whanau of the public release of new information was significant.

'It would have been about three, four months after. And mainly because of our complaints. Because what actually happened was, we were told they were found in their bed. That they'd died in their sleep in their bed and about a week later, we picked up the paper and read that they'd been found in the hall, trying to get out... Yeah. I think that was pretty hard. Opening up the paper and reading facts that you didn't know about'. (L.S.)

Following this, the Savage and Down whanau arranged meetings with both the Fire Service and Police who released the information to the papers saying they were unaware that Whanau had not been contacted with this information. The Police responded by saying it was not their responsibility to pass on this information to the Whanau.

'So Julie and I went to see them [the Police] - and Sonny's parents, went to see the Fire Brigade. We called a meeting with them and they didn't know that we'd been told this as far as they knew, we knew exactly what had happened. And this making sure that people knew the facts was something that came out of that, that korero that we had with the Fire Brigade. We had a meeting with the Fire Brigade and we had a meeting with the police because they were the ones that released the story to the newspaper. Very arrogant the Police. Sergeant Orr at that time. So, and then, like they showed us exactly where - on a map, exactly where they'd been found and what they think happened'.

At this meeting the Chief Fire Officer indicated to the Whanau that it was the Police who had the responsibility to inform them of the media release prior to publication.

'And it was the Police who should have told us about the findings. And of course the Police denied that that's their responsibility. The Sergeant that was here at the time, who thank goodness isn't here anymore, so arrogant...' (L.S.)

As per the above, the attitude of one Police officer (particularly in relation to Whanau complaints), can also be called into question.

It can be seen from the above that a coordinated media policy and liaison procedures need to be developed and adopted. Such a policy would seek to ensure that whanau are informed of any pending press release and its contents prior to the release of this information to the media. This would ensure that their grieving processes are not exacerbated by such insensitive releases of information.

7.25 Counselling Opportunities

The availability of qualified grief counselling for the Whanau was an important issue with Lesley Savage (the only Whanau member to receive counselling), and here only through the efforts of a welfare officer at her work place:

'[I] was working at Tasman where they have a like a welfare officer, type of person and it was him who I went to see and it was him who suggested I go and get counseling, yeah. But done through the work' (L.S)

With regard to the counselling she received Lesley agreed that it was beneficial for her:

'She was quite good because she was a counsellor who'd become a counsellor after going through something traumatic as well, so, it was quite easy talking to people like that'. (L.S.)

From interviews with Lesley Savage it appears that the important issue for her in relation to the role of Victim Support, was the need for contact from people she knew as well as the continuity of that contact.

'So, I think counselling is something that...would probably be more beneficial than Victim Support because Victim Support people aren't really counsellors. I know when they brought the Inquest, you know the outcome of the Inquest - a Victim Support lady brought it around and I didn't really want to talk to her. Because I didn't know her. I would much have preferred to talk to the friendly Policeman, who I'd gotten to know or the lady who had attended us when the fire first happened, who I know quite well as well. But the person who turned up was someone who I didn't know so I didn't want to talk to her. So I think, in those instances, to have someone around you, you know, rather than someone who just turns up and you don't know'. (L.S)

Lesley also felt that for most Maori they would respond better to people they already knew:

'For me, I don't know, and I think it might be relevant to most Maori that it's someone that they know.' (L.S.)

As with the Heretaunga Street incident self-counselling and greater reliance on whanau support seemed to provide the most comfort for other family members.

'I guess we just talked to each other. Helped each other along when we needed it. Just tell a few words of comfort. It happened a lot when we used to get into arguments or things, we'd just ...[be] joking. Didn't really think about a counselling or anything, just looked towards each other'. (Barry Savage)

7.26 Analysis

In reviewing this incident there are a number of issues worthy of analysis in seeking to both learn as much as possible from this tragedy and in drawing conclusions which may be able to be further tested and used to inform future fire safety interventions.

According to Lesley Savage, the overriding factor in this fire incident (and many others in the Kawerau area) is alcohol and drugs:

'I think it just comes down to the drinks and the drugs. You know, and when you go out and drink, you always get really hungry afterwards, come home, cook a feed. See that was actually - see those two were supposed to stay at their cousins house that night but their cousin didn't have any food so they went home and they only lived around the corner so they went home to cook them a feed'. (L.S.)

Another critical factor is the tendency to become very hungry after consuming alcohol and/or smoking marijuana. There also appears to be a preference for hot and often fried food in these situations.

'[I]t happened at four o'clock in the morning. That's a very late time to be going to sleep anyway. And they'd been out all night. They'd left here about sevenish - must have been later than that, seven or eight and I think they actually started drinking before that eh Julie? So you can't stop them doing drinking and you can't stop them doing drugs and you can't stop them going home and cooking a feed and all the advertising in the world's not going to change that'. (L.S.)

The above statement points to the need for more of an environmental focus (in the short term), in seeking to curb the rates of Maori house fire mortality rates, as the behavioural factors are both entrenched and difficult to shift.

In this instance, the presence of smoke detectors and a substitute for the aluminium pots are two environmental factors that could have assisted in avoiding this tragedy. An additional factor (which is a combination of environmental and behavioral factors) is the encouragement for the use of microwave ovens for cooking when under the influence of alcohol or drugs.

7.27 Fire Awareness

In terms of fire awareness messages, Lesley Savage believes that the messages must be focused primarily on the under ten age group.

'Increasing awareness. I'd have to come back to saying the young ones again and I mean like the under tens'. (L.S.)

In terms of the best people to deliver the messages, Lesley believes that people who have first hand experiences of similar situations are the best qualified.

'Probably people who have been involved or you know what I mean. People who have had tragedies happen to them. People who can say it happened to me'. (L.S.)

8.0 Maori Fire Risk Template

The following Fire Risk Template has been developed and refined in order to map the range of risk factors within the Maori community and to identify a range of appropriate interventions and implementation strategies. Here it is intended that the template will play an active role in assisting the Fire Service in identifying both immediate and long term strategies to reduce the number of Maori house fire fatalities.

This template has been derived from a grounded process of research following the independent analysis of the two nominated fire incidents.²⁹ During its initial development it was provided to three Maori Social Service providers participating in the research for comment. This feed back, plus the feedback from the participant hui, resulted in multiple refinements and additional factors being identified.

The template has been divided into behavioural and environmental risk factors, however in many cases the factors identified are in fact a combination of the two.

The template remains an organic document in a developmental phase and it is envisaged that it will continue to be modified following detailed discussions with Fire Service representatives, particularly in terms of the proposed interventions and implementation strategies.

²⁹ For further discussion of Grounded Research see Anselm Strauss & Juliet Corbin, *Grounded Theory Methodology*, in *Strategies of Qualitative Inquiry*, Norman K. Denzin & Yvonna S. Lincoln, Sage Publications Inc. U.S., 1998, p.172-173.

Maori Fire Risk Template

Behavioral Risk Factors:	Causes / Explanation	Effects	Interventions	Implementation Strategies
1. Smoking	<ul style="list-style-type: none"> Greater availability & access to matches/ lighters within Maori households and vehicles due to high smoking rates (50%) 	<ul style="list-style-type: none"> Fires resulting from tamariki in 'tutu' (mischievous) age range (three- eight years old) experimenting 	<ul style="list-style-type: none"> Smoke free homes One lighter per home Smoke free zones within houses (e.g. no smoking in bedrooms) One safe location for lighter 	<ul style="list-style-type: none"> New Zealand Fire Service (NZFS) to directly support smoke free legislation and cessation programmes
	<ul style="list-style-type: none"> Cigarettes as a direct source of accidental combustion 	<ul style="list-style-type: none"> Fires from smoking in bed and from falling asleep while smoking Fires associated with not using an ash tray Fires associated with dangerous smoking habits 	<ul style="list-style-type: none"> Smoking visitors supplied with lighter & provision of safe ashtrays Self extinguishing cigarettes Awareness and education campaigns on dangerous smoking habits 	<ul style="list-style-type: none"> NZFS in partnership with Maori Social Service Providers (MSSP's) to design and deliver campaigns aimed at promotion of safe smoking procedures. NZFS in partnership with MSSP's lobby Government for industry regulated self extinguishing cigarettes
	<ul style="list-style-type: none"> Smoking in cars leads not only to health risks through passive smoking but also to increased fire risk 	<ul style="list-style-type: none"> Car fires through tamariki playing with cigarette lighters 	<ul style="list-style-type: none"> Disable car cigarette lighters Smoke free car campaigns 	<ul style="list-style-type: none"> NZFS in partnership with MSSP's design and deliver education and media campaigns aimed at promoting smoke free/safe car campaigns

Behavioural Risk Factors:	Cause / Explanation	Effects	Interventions	Implementation strategies
2. Alcohol & drugs	<ul style="list-style-type: none"> General loss of awareness & inability to comprehend fire risk situations 	<ul style="list-style-type: none"> Most fire risk factors accentuated 	<ul style="list-style-type: none"> Awareness campaigns illuminating the increased risks of accidental fires associated with alcohol & drugs 	<ul style="list-style-type: none"> NZFS and MSSP joint venture discussions & campaign design
	<ul style="list-style-type: none"> Cooking/heating kai while intoxicated 	<ul style="list-style-type: none"> After party/pub stove fires 	<ul style="list-style-type: none"> Use of the microwave instead of the stove after drinking 	<ul style="list-style-type: none"> NZFS to develop a specific television/ radio campaign promoting firesafe alcohol and drug awareness
	<ul style="list-style-type: none"> Correlation between drugs/alcohol use & incendiary fires 	<ul style="list-style-type: none"> Higher rates of intentionally lit fires 	<ul style="list-style-type: none"> Awareness campaigns illuminating the increased risks of accidental fires associated with alcohol & drugs 	<ul style="list-style-type: none"> NZFS and MSSP joint venture discussions & campaign design
3. Cooking	<ul style="list-style-type: none"> Greater use of, or preference for fried foods in Maori homes 	<ul style="list-style-type: none"> Increased risk/incidence of stove fires from fat/oil catching fires 	<ul style="list-style-type: none"> Encourage other methods of cooking Educate for safe frying/cooking procedures Turn stove off at wall 	<ul style="list-style-type: none"> Joint ventures with MSSP designing & delivering programmes
	<ul style="list-style-type: none"> Use of aluminium pots 	<ul style="list-style-type: none"> Aluminium pots melting when left unattended leading to stove and house fires 	<ul style="list-style-type: none"> Encourage replacement of aluminium pots with safer alternatives 	<ul style="list-style-type: none"> Aluminium pot exchange programme (e.g. NZFS joint venture with supplier)

Behavioural Risk Factors:	Cause / Explanation	Effects	Interventions	Implementation strategies
4. Tamariki & supervision	<ul style="list-style-type: none"> Views of appropriate supervision levels are culturally bound - Maori generally having a lower view of appropriate levels 	<ul style="list-style-type: none"> Tamariki starting fires when unsupervised through a presumption of safety on the part of the caregiver 	<ul style="list-style-type: none"> Kohanga Reo/preschool education programmes Non-stigmatising caregiver programmes (in-house) 	<ul style="list-style-type: none"> NZFS and MSSP joint venture to design and deliver education campaigns
	<ul style="list-style-type: none"> Inadequate supervision due to stress or intoxication of caregivers 	<ul style="list-style-type: none"> Inability to adequately supervise tamariki leading to increased risk of 'tutu' fires 	<ul style="list-style-type: none"> Caregiver support programmes Education campaigns related to fire incidence & supervision 	<ul style="list-style-type: none"> NZFS and MSSP joint venture to design and deliver education campaigns
5. Risks for Kaumatua	<ul style="list-style-type: none"> Kaumatua at increased fire risk due to feeling the cold, requiring more heat, unsafe cooking practices and possible loss of mental faculties 	<ul style="list-style-type: none"> Increased incidence of fires in homes of elderly people 	<ul style="list-style-type: none"> Greater attention to elderly care programmes (e.g. in house support and education) 	<ul style="list-style-type: none"> NZFS and MSSP joint venture to design and deliver education campaigns
6. Mental illness	<ul style="list-style-type: none"> High incidence of mental illness in the Maori community 	<ul style="list-style-type: none"> Increased fire risk due to loss of awareness (e.g. due to medication) and lack of appropriate home support 	<ul style="list-style-type: none"> Increased attention placed upon house care of the mentally ill 	<ul style="list-style-type: none"> NZFS in conjunction with mental illness service providers to design and develop targeted programme

7. Lack of fire safety awareness	<ul style="list-style-type: none"> Ability of tamariki and parents to absorb mainstream education campaigns 	<ul style="list-style-type: none"> Lack of awareness of simple fire safety procedures (e.g. increased incidence & seriousness of fires) 	<ul style="list-style-type: none"> Kaupapa Maori education campaigns delivered face to face Maori Fire Safety officers 	<ul style="list-style-type: none"> Appoint Maori Fire Safety officers to all fire regions Joint venture discussions with MSSPs to design and deliver programmes
---	--	--	--	---

Behavioural Risk Factors:	Cause / Explanation	Effects	Interventions	Implementation strategies
7. Lack of fire safety awareness (cont.)	<ul style="list-style-type: none"> Lack of parental reinforcement of school fire awareness campaigns 	<ul style="list-style-type: none"> Fire safety procedures not adopted in the home 	<ul style="list-style-type: none"> Combined parent/caregiver /tamariki education programmes 	<ul style="list-style-type: none"> Maori Social Service Providers contracted to deliver combined programmes to high risk communities
	<ul style="list-style-type: none"> Low levels of literacy 	<ul style="list-style-type: none"> Inability to absorb fire education material 	<ul style="list-style-type: none"> Compulsory fire education programmes in schools Fire safety home videos 	<ul style="list-style-type: none"> Maori Fire Service ambassadors involved in house to house education campaigns

Environmental Risk Factors:	Cause / Explanation	Effects	Interventions	Implementation strategies
1. Rural/ Remote housing	<ul style="list-style-type: none"> Cultural/economic preference for open fires/coal ranges for cooking & heat 	<ul style="list-style-type: none"> Greater risk of fire & burns from exposure of naked flames to combustible material 	<ul style="list-style-type: none"> Rural Maori fire education campaigns Education campaigns and funding sources for alternative energy systems 	<ul style="list-style-type: none"> Joint Venture discussions with MSSP and NZFS to design & deliver programmes
	<ul style="list-style-type: none"> Lack of access to electricity (e.g. uneconomic to connect to reticulated electricity & unaware/unable to afford outlay for alternative energy system) 	<ul style="list-style-type: none"> Reliance on solid fuel for cooking and lighting leading to greater fire risks 	<ul style="list-style-type: none"> Education campaigns and funding for safe candle & lamp practice Detached kauta/kitchen Provision of low cost alternative energy systems 	<ul style="list-style-type: none"> Fire Service / Industry /District Health Board Joint venture alternative energy system funding and development
2. Lack of access to electricity	<ul style="list-style-type: none"> Economic factors leading to power supply being cut off 	<ul style="list-style-type: none"> Reliance on fossil fuels for light and heat leads to greater risk of fire from naked flame 	<ul style="list-style-type: none"> Direct assistance to affected whanau (e.g. prevention of electricity disconnection) 	<ul style="list-style-type: none"> Legislation to prevent Power companies disconnecting power
3. Rental accommodation	<ul style="list-style-type: none"> Lack of ownership and responsibility for the physical living environment 	<ul style="list-style-type: none"> Less attention to fire risk factors within the home (e.g. escape routes, hazards) 	<ul style="list-style-type: none"> Targeted education campaigns to Maori in rented accommodation 	<ul style="list-style-type: none"> Regional Multi Agency Fire Safety Task Force designs and delivers targeted campaign
	<ul style="list-style-type: none"> Lack of house and fixed appliance maintenance 	<ul style="list-style-type: none"> Increased risk of fire due to faulty appliances 	<ul style="list-style-type: none"> Awareness campaigns & appliance audits 	

Environmental Risk Factors:	Causes / Explanation	Effects	Interventions	Implementation Strategies
4. Smoke detectors	<ul style="list-style-type: none"> Lower rate of installed detectors in Maori homes due to economic & education factors 	<ul style="list-style-type: none"> Greater prevalence and seriousness of household fires 	<ul style="list-style-type: none"> Targeting of landlords /politicians to make smoke detectors mandatory in rental accommodation 	<ul style="list-style-type: none"> NZFS in conjunction with other Health providers to use 'Buying Power' to provide batteries at cost to home owners in lower socio-economic areas.
	<ul style="list-style-type: none"> Lower rate of maintenance of smoke detectors 	<ul style="list-style-type: none"> False sense of security leading to a more casual approach to fire safety 	<ul style="list-style-type: none"> Annual smoke detector checks to Maori households (e.g. follow up programme three-four repeat visits required) Purpose built batteries for detectors only Link escape plans with smoke detector installations and sales Six monthly displays of education material 	
5. House hold materials, appliances & design	<ul style="list-style-type: none"> Prevalence of artificial/toxic household materials and furnishings due to lack of choice on economic grounds Lack of awareness of artificial materials reactions to a fire situation 	<ul style="list-style-type: none"> Toxic fumes pose a greater risk to life in house fires Greater mortality rates from toxic fumes in house fires Natural non-toxic materials are not purchased or used in households 	<ul style="list-style-type: none"> Education campaigns aimed at promoting the use of natural materials Provision of higher quality homes and furnishings Fire exits in two storey homes 	<ul style="list-style-type: none"> Joint Venture Housing NZ, Fire Service and Health Board campaign to develop and fund "healthy" homes programme for both new and retrofitted houses

Environmental Risk Factors:	Cause / Explanation	Effects	Interventions	Implementation strategies
5. House hold materials, appliances & design (cont.)	<ul style="list-style-type: none"> Unsafe appliances 	<ul style="list-style-type: none"> Increased incidence of electrical fires 	<ul style="list-style-type: none"> Annual appliance safety audits Plug and switch guards for houses with small kids Other education campaigns (e.g. on gas heaters) 	
	<ul style="list-style-type: none"> Lack of fire guards on open fires and heaters 	<ul style="list-style-type: none"> Increased incidence of fire from sparks and clothing catching fire 	<ul style="list-style-type: none"> Audit of open fire environments and safe practice education 	
	<ul style="list-style-type: none"> Location of stoves within kitchens 	<ul style="list-style-type: none"> Curtains catching fire from stove fires 	<ul style="list-style-type: none"> Fire walls around stoves – relocate stoves away from windows 	
6. Over crowding	<ul style="list-style-type: none"> Maori homes have a high incidence of overcrowding 	<ul style="list-style-type: none"> Overcrowding is internationally associated with increased fire risk Heaters too close to walls 	<ul style="list-style-type: none"> Provision of higher quality homes with greater capacity to handle larger or extended whanau 	<ul style="list-style-type: none"> Joint Venture discussions with MSSP, NZFS and HNZ to design, provide and monitor firesafe low-income homes
7. Unsafe alterations to dwellings	<ul style="list-style-type: none"> Maori are less likely to seek or be able to afford skilled advice and assistance in house alterations 	<ul style="list-style-type: none"> Increased incidence and seriousness of fires due to unsafe environments Faulty wiring leading to electrical fires Removal of fire safety design features 	<ul style="list-style-type: none"> Provision of skilled design advice and building assistance to low-income families HNZ to monitor closely its building stock & respond to changing needs of clients 	

9.0 Research Implications - Recommended Interventions

9.1 Treaty Policy.

In 1992 the Minister of Health, Simon Upton accepted that Treaty of Waitangi as the 'founding document of New Zealand'.³⁰ The New Zealand Government has expressed its commitment to acknowledging the special relationship between Maori and the Crown under the Treaty.³¹

The Auditor General of New Zealand has recently released a statement outlining the reporting requirements for all Government departments and Crown agencies to monitor their performance in relation to Maori.³² The report states that each public sector organisation should consider how its role and functions relate to the Crown's Treaty of Waitangi obligations suggesting that for example:

*'[I]t needs to consider whether its activities might affect rangatiratanga (control) over resources and taonga (Article II) or influence the degree of quality of access by Maori to services, which affect equity of outcomes (Article III)'.*³³

As Maori are disproportionately affected by fire incidents in Aotearoa and are perhaps the largest single Fire Service 'user group' in the country, it can be seen that the need for high level policy development is a pressing issue.

Through Article 1 of the Treaty of Waitangi under 'kawanatanga', the Fire Service as a Crown agency is in a position to develop a specific Fire Service Treaty policy that will provide the necessary framework for the identification, design and delivery of a range of appropriate services to the Maori community.

9.2 Potential role of Maori Social Service providers.

The potential role of Maori Social Service providers in the delivery of fire awareness campaigns and environmental interventions has become a key focus of this research. Previous research suggests that 'A co-ordinated approach across sectors has the capacity to deliver programmes that reduce preventable premature deaths and reduce injury related disability'.³⁴

³⁰ Te Wahanga Hauora Maori, *Whaia te Ora mo te Iwi: Strive for the Good Health of the People*, Department of Health, Wellington, 1992, p.23.

³¹ The Government's Medium-term Strategy for Health and Disability Support Services 1999, Ministry of Health, 1999.

³² Controller and Auditor General, *Report of the Controller and Auditor-General, Delivering Effective Outputs for Maori*, Reprint of Third Report for 1998, (parliamentary paper B.29[98c]), November 1998.

³³ *Ibid.*, p.81.

³⁴ Mavis Duncanson, Alistair Woodward, Paarangi Reid, University of Otago Research Team, *Social and economic deprivation and fatal unintentional domestic fire incidents in New Zealand 1988-1998*, 1999.

Three Maori providers were identified and approached with regard to participating in this research and all agreed to become involved in varying capacities as follows:

Ngati Porou Hauora

Ngati Porou Hauora is the major health provider to the East Coast region running Te Puia Springs Hospital and six other clinics from Te Araroa to Gisborne. Many employees are volunteer fire fighters and have a keen personal interest in fire safety issues in the region.

Due to the remote nature of much of the East Coast there is both a need for and willingness from the community to handle their own health affairs. From interviews with Dianne Gibson and Terry Ehau this extends to the desire to become more closely involved with the Fire Service in both designing and delivering fire awareness and safety campaigns in the area.

The establishment of a Fire Service Maori Safety Education position in the region would definitely assist in providing the necessary links with Ngati Porou Hauora and other agencies however care would need to be taken to ensure that the job description was tailored to the specific needs of the area and dovetailed with the functions of such existing health providers.

Te Hauora o Te Taitokerau

Te Hauora o Te Taitokerau (THOT) is a well established Maori social services provider to the Northland region with over 100 staff. THOT runs over twenty separate social service programmes and holds major contracts with several Health Service providers. Interviews with Grant Berghan, the Chief Executive Officer (CEO), indicated both strong support for the research and in becoming involved in the design and delivery of programmes in the Northland region.

As with the East Coast the Northland Fire region is without a dedicated Maori Fire Safety Education officer. The region appears to suffer from this, insofar as there has been no direct contact to date between the Fire Service and THOT as a major Maori community organisation in the region. The creation of such a liaison position will directly assist any joint venture programmes between the Fire Service and social service providers like Te Hauora o Taitokerau.

Tipuora

Tipuora is a Rotorua based Maori Social Service provider established in 1991. Tipuora, have established a good working relationship with Piki Thomas the Bay-Waikato Maori Fire Safety Education Officer over the last three years, (particularly through their CEO, Matapihi Kingi). Through this relationship they have already added fire safety awareness to their existing range of services, particularly through the Baby Start programme which they pioneered in 1991. This programme involves the use of young grandmothers who act as kaitiaki or mentors to young Maori parents of babies up to the age of 5. The existing positive relationships established between the kaitiaki and

these whanau have already allowed for fire safety information to be provided in a manner which best allows for the messages to be understood and acted upon.

Here the benefit of an existing Maori liaison officer in the Rotorua region has already allowed for a beneficial collaborative working relationship in the delivery of fire safety messages to Maori.

Fire Service Joint Venture Awareness Programmes

Following discussions and feedback from these agencies, it can be seen that there are three key benefits of such a joint venture design and delivery approach as follows:

- Existing Maori Social Service providers are organisationally equipped to design and deliver services to Maori communities.
- Such providers have extensive Maori community and interagency contacts and relationships in place.
- Such providers, through their existing client bases and their profiles within their respective communities, are able to provide the critical non-stigmatising delivery of behavioral change and awareness programmes to Maori.

The latter benefit is significant insofar as such agencies often already have at risk Maori client bases, enabling additional awareness campaigns to be added to their existing programmes in a non-stigmatising manner. Such an approach removes the need to add a separate interface with the client group, preserving trust based relationships which have often been built up over several years. Also, such joint venture campaigns are potentially highly cost effective, with both the organisational and community relationships already established.

While the initial focus of such joint venture programmes could focus on the delivery of behavior based educational campaigns, it is likely that environmentally focused programmes could either be combined with, or follow up on these campaigns. For instance an awareness programme could include the installation and/or maintenance of smoke detectors in client homes.

This report indicates that a series of interagency joint venture Fire Awareness campaigns between the Fire Service and existing Maori Social Services Delivery Agencies could deliver effective non-stigmatised programmes to Maori in 'at risk areas'.

9.3 Appointment and role of Maori Fire Safety Education officers

Based on the apparent success of the role played by the Maori Fire Safety Education officer in the Bay/Waikato Fire region and the over representation of Maori in fire mortality and injury rates nationwide, the appointment of Maori Fire Safety Education officers to all six remaining Fire Regions is seen as an urgent priority.

9.4 Whanau liaison and media policy

The development of specific Fire Service/Police media and whanau liaison policies will assist in the provision of timely and sensitive information to whanau affected by fire incidents.

9.5 Counselling opportunities

Counselling has been identified as one of the key aspects for healing of whanau involved in a fire tragedy. It is important that whanau are embraced in supportive processes for accessing culturally appropriate and qualified counsellors.

One avenue often relied on for funding and access to counselling services in New Zealand is the accident compensation scheme. The accident compensation scheme provides 24-hour, no-fault, comprehensive and compulsory accident insurance for NZ citizens, residents or temporary visitors who are injured in an accident. Created by the Accident Rehabilitation and Compensation Insurance Act 1992 the Accident Rehabilitation and Compensation Corporation (ACC) is government owned and operated.³⁵

In 1998, Te Puni Kokiri (TPK) released findings showing that Maori claimants held a large degree of dissatisfaction with ACC services.³⁶ Furthermore TPK's review found that 'decisions by ACC about the types of services to provide to, or fund for, claimants have generally not taken into account the unique needs and preferences of Maori claimants'.³⁷

The review recommended that ACC routinely assess the effectiveness of service provision to Maori and that local level strategies are implemented to:

- i) improve information to and communication with Maori claimants and whanau, especially in regard to ACC processes, entitlements and services;*
- ii) increase the opportunities for timely, face-to-face contact between case managers and Maori claimants, especially in remote rural areas; and*

³⁵ A Cultural Development Unit was established in 1995 (Strategic Cultural Unit as of September 1997) within ACC to assist development of Maori, Pacific Island and other ethnic group services. Te Puni Kokiri, Ministry of Maori Development, Monitoring and Evaluation Branch, *ACC, Service Delivery to Maori*, January 1998, p.22.

³⁶ *Ibid.*, p.7.

³⁷ *Ibid.*, p.8.

iii) provide the opportunity for claimants to involve whanau members in their care and rehabilitation'.³⁸

An earlier TPK report focusing on Maori claimant and provider perspectives Maori Service providers suggested that the lack of ACC-accredited Maori counsellors reduced access of Maori claimants to appropriate counselling services.³⁹

'Ideally, many participants would like to have a broader range of options for treatment than the services currently funded by ACC. In particular, participants would like more Maori providers, and providers of Maori therapies and treatments which include the spiritual apexes of their care. Many participants commented on feeling more comfortable with Maori providers who were able to relate to Maori'.⁴⁰

The Marsh/Pukeroa whanau were denied ACC funding for counselling on grounds that they did not fit into the rape, alcohol or domestic abuse categories.⁴¹ This denial of support was detrimental to the healing process for the whanau.

- The ability for whanau affected by fire fatalities to qualify for grief counselling through ACC or other Government agencies is essential.
- It is essential that the Fire Service are at least able to refer grieving family members on to fully qualified grief counselling services.
- Support group opportunities utilising whanau with first hand experience of whanau fire fatalities is seen as an effective form of grief counselling.
- Self-counselling with whanau relying on and building their own support systems is also seen as an effective form of grief counselling, although this should not be relied on in isolation.
- The availability of appropriately qualified counsellors outside the main centres is seen as an issue with whanau needing and deserving the best possible service available.

The ability of the Fire Service, in conjunction with other agencies to refer whanau affected by Fire fatalities to qualified grief counseling and/or support groups will greatly assist in supporting these whanau through the grief process.

³⁸ Ibid., p.12-13.

³⁹ Te Puni Kokiri, Monitoring and Evaluation Branch, *ACC's Service Delivery, Maori Claimant and Provider Perspectives, Key Findings*, December 1997, p.36.

⁴⁰ Ibid., p.28.

⁴¹ ACC only covers personal injury (personal injury is a physical injury, or a mental injury caused by a physical injury, or a mental injury caused by nervous shock after sexual assault or abuse), resulting from accident, medical mishap and error, sexual assault and abuse Accident Rehabilitation and Compensation Insurance Corporation, (ACC) *You and ACC, Working Together*, July 1999, p.3.

9.6 Landlord and tenancy issues

HNZ has been identified as a key stakeholder insofar as this research has focused discussion around a fatality which occurred in a HNZ low-income home.

Landlords have legal responsibility for providing and maintaining safe premises for their tenants. The standard Residential Tenancy Agreement as approved by the Ministry of Housing confirms that landlords have a responsibility to:

'Provide and maintain the premises in a reasonable condition' and 'Comply with all building, health and safety standards that apply to the premises'.⁴²

HNZ, a state-owned enterprise, owns and manages the Crown's low-income residential rental properties in NZ. With 59,189 tenancies (approximately 180,000 tenants) HNZ is one of the most influential landlords in the country.⁴³

HNZ provides a fire safety message as part of its *To Whare* briefing document for its new tenants.⁴⁴ Fire safety is dealt with briefly in three pages and provides information on what to do in the event of a fire and fire prevention techniques.⁴⁵ The text is in both English and Maori. HNZ also complies with the aspects of the requirements of the Fire Services Act 1975 and Fire Safety and Evacuation of Buildings Regulations 1992 *'by establishing, maintaining and managing evacuation schemes and evacuation procedures for affected residential buildings'.⁴⁶*

Te Puni Kokiri (TPK) concluded in 1998 that HNZ needs to develop a strategy which gives expression to its commitment to Maori service delivery.⁴⁷ Some participants in the TPK research expressed concern *'that HNZ generally does not understand the cultural needs of its Maori tenants'.⁴⁸*

In attempting to meet the Crown's social obligations to provide and maintain low-income housing for New Zealanders, HNZ has adopted four strategic goals.⁴⁹

⁴² s45 (1) Residential Tenancies Act (RTA) 1986. Landlords must also meet the fire safety requirements of the NZ Building Code.

⁴³Housing New Zealand Ltd, Housing NZ Portfolio, November 2000.

⁴⁴ A request was made to HNZ for information on its policies and practices regarding fire safety, knowledge, practices and procedures. In response HNZ provided its briefing document *To Whare* and developed a report specifically detailing this information; Housing NZ Ltd, *Fire Safety Knowledge, Practices, and procedures*, HNZ-T-358/ Issue 3, March 2001. The *To Whare* document covers various issues concerning tenancy such as the tenancy agreement, rent, keeping the home in good condition, safety and security and care of the home.

⁴⁵ Ibid.,p38-41.

⁴⁶ This involves 6 monthly trial evacuations, (although some properties are granted exceptions by the Area Chief Fire Officer under certain conditions). Tenants living in units in a building with fire evacuation schemes (eg Star flat or apartment block) are provided with additional fire safety and evacuation information. Housing NZ Ltd, *Fire Safety Knowledge, Practices, and procedures*, HNZ-T-358/ Issue 3, March 2001.

⁴⁷ Te Puni Kokiri, Ministry of Maori Development, Monitoring and Evaluation Branch, *Regional Housing Issues, Feedback from Maori*, 1998.

⁴⁸ Ibid.

⁴⁹ Housing New Zealand Ltd, Housing NZ Statement of Corporate Intent, for period 2000/01-2002/03, p.2.

1. Provide and facilitate access to sustainable housing solutions that are affordable, of good quality and allocated on a needs basis.
2. Foster strong communities in areas of predominantly state houses.
3. Assist Government in implementation of it's '*Closing the Gaps*' policy.
4. Assist the Crown's objectives in a business-like manner and therefore (amongst other things) exhibit a sense of social & environmental responsibility whilst exhibiting a positive example for private landlords.

HNZ indicates that it is developing its communication procedures/protocols and staff capacity/capability to work with different communities including Maori. HNZ specifically recognises the need for 'regional based input from iwi, Maori and community groups in the development of housing solutions and initiatives that build capacity and close disparity gaps'.⁵⁰

These initiatives may form the basis of the developing methodology for quantifying the 'social benefit value of assisting to meet the Crown's social agenda'.⁵¹ This would logically include development of a detailed Treaty policy. It is vital that Kaupapa Maori fire safety research be acknowledged as a key intervention and guide in these policy directives.

Due to a complex history of dispossession and interrelated socio-economic impacts Maori form a high proportion of tenants in low-income housing.⁵² Although all HNZ objectives will have wide ranging impact, implementation of Objective 3 (assistance to government in it's Closing the Gaps policy) will have most significant ramifications for fire safety interventions in Maori homes.

Research findings show a correlation between socio-economic conditions and fire risk in the home.⁵³ Low socio-economic status can lead to overcrowding and unsafe and illegal alterations to homes. If low-income homes are not built, adapted and regularly monitored for fire safety, tragedies involving Maori whanau will continue to happen.

- The development of closer relationships between HNZ and the Fire Service and Maori Social Service Providers would assist in maximising the potential of specifically designed and delivered education campaigns for Maori.

⁵⁰ Ibid., p.12.

⁵¹ Ibid., p.14.

⁵² For example Maori face barriers to building on multiple-owned land which leads to reliance on low-income housing. Associate Minister for Housing Tariana Turia recognises these issues, '*The government has an obligation to provide affordable, adequate housing for those in serious need... There are serious issues facing Maori landowners such as rules that create barriers to whanau utilising their own land-we are committed to addressing these obstacles.*' Press Release 8/03/2000, NZ Government Executive Website, <http://www.executive.govt.nz/speech.cfm?speechralph=30603&SR=0>.

⁵³ Key actors have been associated with socio-economic deprivation and fire related injury: '*Housing quality; Lack of smoke detector; Smoking; Alcohol intoxication; Sole parenthood; Low educational level; and Minority ethnic group affiliation.*' Mavis Duncanson, Alistair Woodward, Paarangi Reid, University of Otago Research Team, '*Social and economic deprivation and fatal unintentional domestic fire incidents in New Zealand 1988-1998*', December 1999, p.15. Also see Frances Sutton, '*Analysis of the community characteristics of the residential fire risk in NZ*', Ogilvy & Mather, 1994, p.2 and Federal Emergency Management Agency, '*Socioeconomic factors and the incidence of fire*', United States Fire Administration, National Fire Data Center, 1997, p.1. Anne McNicholas, Diana Lennon, Peter Crampton, Phillipa Howden-Chapman, '*Overcrowding and infectious diseases – when will we learn the lessons of our past?*' Unpublished, p.5.

- Appropriate assessment of the housing needs of occupants in low-income dwellings is vital in terms of designing new accommodation and retrofitting existing ones.
- Utilisation of the Fire Risk Template as a design brief tool (for architects and associated professionals) will also assist in achieving firesafe and culturally appropriate design and retrofitting outcomes.

9.7 Advertising and Awareness Campaigns

It is the contention of this research project that annual Fire Service contestable advertising contracts and regional campaigns should be cognizant of individuals, who through personal experience of a fire incident are able to assist in delivering fire safety messages to target Maori audiences.

Likewise, local fire service strategies may benefit from following the lead of international fire service safety campaigns which are evolving into 'community-based fire prevention programs employ[ing] fire prevention practices that are targeted to the specific needs of local communities.'⁵⁴

There is a need to ensure that there is a mechanism in place to ensure advertising campaigns are audited in terms of cultural content and correct pronunciation of Maori words.⁵⁵

⁵⁴ Federal Emergency Management Agency, *Fire Death Rate Trends*, United States Fire Administration, National Fire Data Center, 1997, pp.16-17.

⁵⁵ The recent television advertising campaign (January 2001) 'Come on guys get fire wise' mispronounces the word 'whanau'. It has been suggested that programmes should be created which Maori can 'develop' alongside of and that '*converting, adjusting, manipulating or extending programmes intended for non-Maori ... for use with Maori*' should be avoided. The Ministry of Health, *Kia Whai te Maramatanga, The effectiveness of health messages for Maori*, Wellington, 1994, p.26.

9.8 Potential role of whanau with first hand experience

The development and maintenance of a data base of Maori whanau affected by fire fatalities will allow the Fire Service to utilise members of this group in the development and delivery of effective community and national fire awareness programs.⁵⁶

9.9 Smoke Alarms

Installation of smoke detectors has been found to be a simple, effective environmental strategy to provide early warning of a household fire. This research supports earlier research recommendations that priority should be given to programmes to install smoke detectors in households at the higher levels of social and economic deprivation. The New Zealand Indices of deprivation (NZDep91/NZDep96) are useful for identifying such communities.⁵⁷

The Bay of Plenty/Waikato fire region has continued to be active in undertaking smoke alarm programmes. With Ngaruawahia having a well established programme along with several other campaigns in other Bay of Plenty towns and districts.

The success of the initial Smoke detector installation campaign in Bay of Plenty (1997-1999) and the use of deprivation indices for identifying high domestic fire risk areas indicates the priority of replicating such campaigns throughout the country.

It is also recommended that the installation of smoke detectors in all rental accommodation be mandatory in seeking to provide increased protection for vulnerable members of communities.

9.10 Research and development required in delivering fire safe environments for Maori

There is currently a lack of detailed information about the quality of New Zealand housing:

'An audit of the housing stock would potentially identify further issues which require attention to improve household safety'.⁵⁸

⁵⁶ It is interesting to note that one of the long term strategic goals for Maori health developed by the Ministry of Health aims at strengthening individual and whanau skills. The goal points out that many health issues relate to living conditions as well as lifestyle, and that both individual and whanau based skills are important empowering tools for creation of healthier living. Ministry of Health, *Wananga Purongo Korororero, Nga Matatini, Strategic directions for Maori Health, A Discussion Document*, p.13.

⁵⁷ These indices have been 'validated in New Zealand...[for measuring] ...social and material disadvantage, relative to the wider society, at meshblock level', Mavis Duncanson, Alistair Woodward, Paarangi Reid, University of Otago Research Team, *Social and economic deprivation and fatal unintentional domestic fire incidents in New Zealand 1988-1998*, 1999, p.8.

⁵⁸ Ibid

Legislation and government policy can also ensure that housing stock is affordable and safe for New Zealand households.

The Fire Service in conjunction with agencies is in a position to sponsor more detailed research and development of both new and retrofitted Fire Safe home environments for Maori and other low income groups.

9.11 Dual focus on behavioural and environmental factors

'[I]mproving housing safety, installing smoke detectors, and minimising fire risk from cigarette smoking can reduce risk, although they do not address underlying causes'.⁵⁹

There is evidence to suggest that a greater focus on environmental factors will assist in lowering the rate of Maori house fire mortality rates for the most at risk groups.

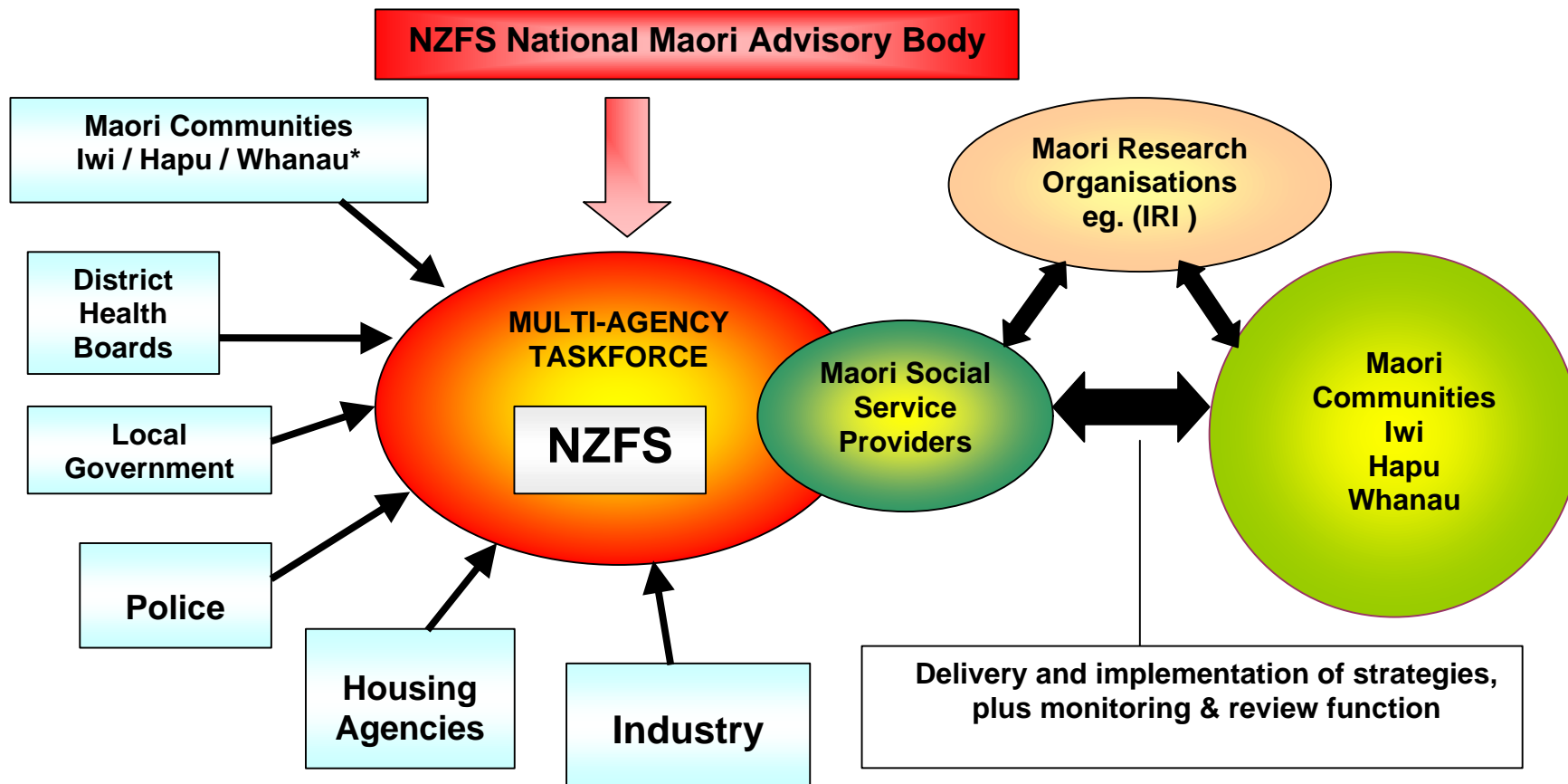
9.12 Rural Housing Campaigns

Preliminary analysis of Maori Fire deaths over the last 10 years indicates that a significant number of these fatalities occurred as a direct result of substandard accommodation. Many of these incidents involved fires in houses, caravans and outbuildings where naked flame light sources were employed. While statistical analysis is continuing it appears that there is the need for specific Joint Venture intervention programmes focusing on improving fire safety in these environments.⁶⁰

⁵⁹ Ibid.

⁶⁰ Personal communication with Mavis Duncanson, January 2001

10.0 Stakeholder Relationships



MULTI AGENCY REGIONAL MAORI FIRE SAFETY TASKFORCE

10.1 Treaty based multi-agency Taskforce

The above diagram represents the stakeholder relationships involved in the creation of regional multi-agency taskforces charged with designing, developing and delivering fire safety services and education to Maori. Such Taskforces can be established with the support of a National Maori Advisory Body.

The Taskforces consist of high level representation from District Health Boards, Housing agencies (including Housing New Zealand and Housing corporation), Police, Iwi and Industry. Here the Fire Service are necessarily central to this process as per their Treaty relationship with Maori (expressed in the Fire Service Treaty Policy to be developed), however as per this diagram, responsibility for designing, delivering and funding of the Taskforce's operations is a shared one.

Maori Social Service providers play a key role in the design and delivery of the strategies developed by the Taskforce hereby utilising their critical profiles and experience within the Maori community.

A monitoring and review function is facilitated through the use of Maori research organisations who are able to sit alongside MSSPs and Maori community representatives in ensuring the ongoing effectiveness of the services delivered.

Following the development of a robust Fire Service Treaty Policy it is recommended that a National Maori Advisory body be created and made responsible for the development of Regional Multi Agency Maori Fire Safety Taskforces. The monitoring and review of these Taskforces can be facilitated at a national level through the National Maori Advisory Body and at local levels through regional review mechanisms.

11.0 Appendix

11.1 Table 1

Table1: Percentage of Maori injuries (resulting in hospitalisation) caused by fire/burns between 1985-1994⁶¹	
Mokopuna	20%
Tamariki	8%
Kaumatua	5%

- **Table 2**

Table 2: Percentage of Maori deaths caused by fire/burn injury between 1985-1994⁶²	
Mokopuna	7%
Tamariki	15%
Kaumatua	11%

⁶¹ Please note that the following age classifications apply in this analysis. Mokopuna are aged one year and under, tamariki are aged between one to fourteen years and kaumatua, are aged over sixty five. Also refer to footnote 5 for brief discussion of research methods. John Broughton, *Injury to Maori, Does it really have to be like this?*, Dunedin: Te Ropu Rangahau Hauora o Ngai Tahu and Injury Prevention Research Unit, 1999, p.p.18, 25, 50.

⁶² Ibid., p.p. 55, 58, 76.

12.0 Bibliography

Accident Rehabilitation and Compensation Insurance Corporation, (ACC) *You and ACC, Working Together*, July 1999.

John Broughton, *Injury to Maori, Does it really have to be like this?*, Dunedin: Te Ropu Rangahau Hauora o Ngai Tahu and Injury Prevention Research Unit, 1999.

Mason Durie, *Whaiora; Maori Health Development*, 2nd Edition, Oxford University Press, Auckland, 1998.

Mavis Duncanson, Alistair Woodward, Paparangi Reid, University of Otago Research Team, *Social and economic deprivation and fatal unintentional domestic fire incidents in New Zealand 1988-1998*, 1999.

Mavis Duncanson, Alistair Woodward, Paparangi Reid, University of Otago Research Team, *Process and outcome evaluation of Auahi Whakatupato smoke alarm installation project in the Eastern Bay of Plenty 1997-1999*, August 2000.

Federal Emergency Management Agency, *Socioeconomic factors and the incidence of fire*, United States Fire Administration, National Fire Data Center, 1997.

Federal Emergency Management Agency, *Fire Death Rate Trends*, United States Fire Administration, National Fire Data Center, 1997.

Housing New Zealand (NZ) Ltd, *Housing NZ Portfolio*, November 2000.

Housing New Zealand Ltd, *Housing NZ Statement of Corporate Intent*, for period 2000/01-2002/03, p.14.

Housing New Zealand Ltd, *To Whare*.

Housing New Zealand Ltd, *Fire Safety Knowledge, Practices, and procedures*, March 2000.

Key Research and Marketing Ltd, Kay Rayner and Moira Moroney, *Determining Effective Fire Safety Strategies for Maori, New Zealand Fire Service Bay-Waikato Region Maori Fire Study*, 1999.

Ministry of Housing, Tenancy Services, Te Whare Ahuru, *Residential Tenancy Agreement (Standard)*, 2000.

New Zealand Council of Christian Social Services, *Taking Stock!, A report on the problems & possibilities for housing policy in New Zealand*.

New Zealand Fire Service, Audit Team, *Operational Incident Audit (Lincoln Grove, Porirua Fatal House Fire)*, Nov 1997.

New Zealand Fire Service, Dennis H Health, (Assistant Fire Region Commander, Fire Safety), *Briefing Paper; Development of the role of Fire Safety Education Officer for Maori*, Bay-Waikato Fire Region, March 1998.

New Zealand Fire Service, Bruce Emerson (Investigating Officer), Mike Lister (Assistant Fire Region Commander, Northland Fire Region), Dave Grey (Health and Safety Officer, Northland Fire Region), Investigation report, FI 6/2000, February 2000.

New Zealand Fire Service, Fire Dynamics Report, Fatal Fire, Heretaunga St, February 2000.

Nga Moteatea (The Songs) Part 1, A selection of Annotated Tribal Songs of the Maori with English translations, *He Tangi Mo Tana Tama*, The Poynesian Society Inc, Auckland, 1988.

Linda Tuhiwai Smith, *Kaupapa Māori Health Research. In Hui Whakapiripiri: A Hui to Discuss Strategic Directions for Māori Health Research*. Wellington School of Medicine: Te Rōpū Rangahau Hauora a Eru Pōmare, 1996.

Linda Tuhiwai Smith & Fiona Cram, *An evaluation of the Community Panel Diversion Pilot Project*. Commissioned by the Crime Prevention Unit, Office of the Prime Minister and Cabinet, Wellington, 1997.

Graeme Hingangaroa Smith, G.H Fitzsimons, P & M Roderick, *A Scoping Report: Kaupapa Māori Frameworks for Labour Market Programmes*, A report to the Māori Employment and Training Commission, International Research Institute for Māori and Indigenous Education, Auckland, 1998.

Frances Sutton, *Analysis of the community characteristics of the residential fire risk in NZ*, Ogilvy & Mather, 1994.

Te Puni Kokiri, Ministry of Maori Development, Monitoring and Evaluation Branch, *ACC, Service Delivery to Maori*, January 1998.

Te Puni Kokiri, Monitoring and Evaluation Branch, *ACC's Service Delivery, Maori Claimant and Provider Perspectives, Key Findings*, December 1997.

Te Puni Kokiri, Ministry of Maori Development, Monitoring and Evaluation Branch, *Regional Housing Issues, Feedback from Maori*, 1998.

Megan Tunks, *Maori Fire Study in the Bay-Waikato region*, 1999-2000.